In the Specification:

Page 12, the paragraph bridging pages 11 and 12:

Then, heat rays emitted from the heating lamps 42A and 42B transmit the transmitting window 8 to enter the surface of the semiconductor wafer W, so that the wafer w is heated and the temperature thereof is rapidly increased. The temperature elevation speed is, for example, about 100°C/sec to about 200°C/sec. In the case where ultraviolet discharge lamps are used as the heating lamps, the ultraviolet discharge lamps are duty-controlled to control the electric power to be supplied thereto. This manner also applies to the respective embodiments described hereinbelow. Then, the wafer W is subjected to the annealing process, while it is maintained at a process temperature of 400°C or more, e.g., 500°C to 1000°C for a predetermined period. The reason for duty-controlling the ultraviolet discharge lamp is as follows. That is, when the electric power continues to be supplied to the ultraviolet discharge lamp, with gradually increasing the power, discharge does not occur until the electric power takes a certain value (threshold value). Namely, a heat ray amount cannot be gradually increased in proportion to the supplied electric power, and thus the heat ray amount cannot continuously change from 0% to 100%. However, when the duty control based on varying duty ~~cycle~~ ratio is carried out by the sufficient electric power to occur discharge, these problems can be solved at once.

Page 12, first full paragraph:

Upon completion of the annealing process, the temperature of the wafer W is rapidly lowered. In order thereto, the heating lamps 42A and 42B are turned off, and an electric current is caused to flow through the Peltier elements 24A in the thermoelectric converter 24 disposed on the lower surface of the table 10 in such a direction that upper surfaces of the Peltier elements 24A are cooled. In addition to the cooling effect produced by convection in

the processing vessel 4 and radiation, a cold (negative) heat energy generated on the upper surfaces of the Peltier elements 24A cools the same. Thus, the table 10 in contact with the Peltier elements 24A is cooled to rapidly cool the wafer W, i.e., the temperature of the wafer W can be rapidly decreased. At this time, the lower surfaces of the Peltier elements 24A become hot by a ~~a~~ hot (positive) heat energy generated thereon, a heat medium for cooling is caused to flow through the heat-medium flow path 30 of the heat-medium jacket 36 formed in the base plate 22. Thus, the heat energy generated on the lower surfaces of the Peltier elements 24A is taken outside the system by the heat medium so as to cool the lower surfaces of the Peltier elements 24A. The heat medium for cooling may be a cooled water, for example.